Port Mahon Lighthouse
Delaware Bay at mouth of Mahon River, on State Route 89
Little Creek vicinity
Kent County
Delaware

HABS No. DE-214

HABS
DEL,
1-LITCRE.V,
1-

PHOTOGRAPHS

WRITTEN HISTORICAL AND DESCRIPTIVE DATA

REDUCED COPIES OF MEASURED DRAWINGS

HISTORIC AMERICAN BUILDINGS SURVEY
MID-ATLANTIC REGION NATIONAL PARK SERVICE
DEPARTMENT OF THE INTERIOR
PHILADELPHIA, PENNSYLVANIA 19106

HABS
DEL,
1-LITCREV
1-

HISTORIC AMERICAN BUILDINGS SURVEY

PORT MAHON LIGHTHOUSE HABS No. DE-214

Location: The Port Mahon Lighthouse is situated in the Delaware Bay on the eastern shore of Kent County, Delaware, opposite the south point of Kelly Island where the Mahon River joins the Delaware Bay. Port Mahon is located approximately eight miles east of Dover, Delaware, and three miles east of Little Creek, Delaware, on State Route 89.

Present Owner: Delaware Storage and Pipeline Co., Inc.
135 First Street Cambridge
Cambridge, MA D2141

Present Occupant: Vacant

Present Use: Abandoned and Unused.

Significance: The currently existing Port Mahon Lighthouse is the fourth lighthouse built at this location since 1831. It is listed on the National Register of Historic Places and is considered to be a fine example of turn-of-the century Chesapeake Bay-style lighthouse architecture--the only one of its kind remaining in Delaware. It is also a fine example of screw-pile lighthouse architecture, a unique style of foundation popularized in the nineteenth and early twentieth centuries. The lighthouse is also an outstanding visible monument to Delaware's maritime heritage.

A lighthouse was first built at Port Mahon in 1831 due to the heavy use of that part of the Delaware Bay by commercial oyster boats. The Delaware oyster industry, nationally significant during the nineteenth century, was centered around Port Mahon. The lighthouse is still an object of attention for historians, tourists, and artists and is reported to still be an important landmark to boaters on the Delaware Bay.

Part I. HISTORICAL INFORMATION

A. Physical History:

A.1. Date of Erection. The present Port Mahon Lighthouse, which is the fourth lighthouse at Port Mahon, was completed in 1903 when, according to Lighthouse Board records, "The new lighthouse was finished, the roof sheathed, the floors laid, the exterior painted, interior woodwork put in place and finished and the lens was set up in the new lantern." The light became operational on June 25, 1903. In addition, a new barn and oil house were erected in 1903, the remainder of the iron column foundations of the new walks were installed, the deck and railing attached, and the new wharf was completed.

A.2. Architect. The original plans for the lighthouse prepared by the United States Lighthouse Board indicate that Lieutenant Colonel W. A. Jones, of the United States Corps of Engineers, Fourth Lighthouse District, was the author of the plans dated 1900. However, it cannot be clearly stated whether he was responsible for all architectural work.

A.3. Original and Subsequent Owners. The United States Congress appropriated $8,500 for the construction of the new (fourth) lighthouse on June 11, 1896, and the land was acquired from Harriet Atkinson and Harriet Comegys on February 11, 1898 for the sum of $200. The lighthouse building and ground were owned by the United States Government from the date of acquisition in 1898 until 1982. The lighthouse was originally under the auspices of the United States Lighthouse Board, which later became part of the United States Coast Guard. The Coast Guard permanently abandoned the lighthouse in 1949, and it was sold as surplus property to the Department of the Air Force in 1955. The Air Force used the site as a transshipment point for jet fuel being shipped to the Dover Air Force Base, approximately ten miles to the southwest. In 1982, the property was again declared as surplus (by the Air Force) and was offered to the highest bidder by the General Services Administration. The property, including the lighthouse, was awarded to the Delaware Storage and Pipeline Company of Cambridge, Massachusetts, on a bid of $9,100. This company is a subcontractor to the Dover Air Force Base for the shipment of jet fuel.

A.4. Builder. On July 26, 1901, the United States Lighthouse Board contracted Benjamin T. Collins of Milford, Delaware, to erect the new lighthouse, oil house, and wharf on a bid of $9,994. Construction took place during 1902 and 1903. No records of suppliers are available.

A.5. Original Plans and Construction. The Lighthouse was planned and constructed as a two-story, square, frame structure having an iron column foundation and a pyramidal roof, on the center of which was the lantern, mounted in a frame and iron cupola. The interior was designed as a center-passage, double-pile plan with a centrally-located stair and two brick chimney piles located one each at the juncture of the partition walls defining the flanking rooms. The house consisted of two floors and the lantern floor. The first floor was designed to have four rooms: a dining room, a parlor, kitchen, shop, and store room. The second floor was designed to have three bedrooms, a bedroom or store room, and two closet-storerooms. The lantern floor contained the space for the light. An oil house was constructed approximately 64 feet from the lighthouse. Next to the oil house, a barn was built, and a wharf approximately 220 feet from the oil house. All structures were connected by an elevated walkway which was seven feet high and four feet wide.

A.6. Alterations and Additions. The only planned alteration to the Port Mahon Lighthouse occurred in 1938 when the light was electrified for the first time. An electric beam replaced the kerosene lantern and was thereafter operated automatically. In 1949, the light was replaced by an electric light fastened atop a pole in the Bay and the Port Mahon Lighthouae was abandoned. Structural alterations which have occurred since 1949 are the result of neglect, weathering, and in some cases, vandalism. Much of the siding has worn away as has the porch and railing. All of the interior and exterior trim and hardware has been removed. The oil house, barn, privy, and wharf have all been destroyed and only remnants of their foundations are visible at low tide.

B. Historical Content. The Port Mahon Lighthouse represents 150 years of history of Delaware Bay boating and fishing activity. This area has been a crucial shipping channel during most of the nineteenth and twentieth centuries. Commercial fishing became an important economic activity in the 1820's after the opening of the Chesapeake and Delaware Canal and the Lewes Breakwater Project. Almost all of the state's oyster boats have been berthed in Port Mahon with their crews residing in the nearby towns of Leipsic and Little Creek. In addition, steam pleasure boats brought many Wilmingtonians and Philadelphians to bayfront communities in Kent County for recreation. J. Thomas Scharf, noted Delaware historian, wrote in 1888 that, "Port Mahon is esteemed the best harbor for coasters [boats] on the Delaware."

The boom in ship traffic in the Port Mahon area and the main shipping channel six miles to the east in the Bay created the potential for danger because of the treacherous Joe Flogger shoals located immediately offshore. Therefore, it was deemed necessary to construct a lighthouse at Port Mahon.

On March 31, 1831, Congress appropriated $10,000 for the building of a lighthouse at Port Mahon, and on July 23 of that year, Winslow Lewis, a builder from Boston, was hired to accomplish that task. The lighthouse was built one mile south of the current lighthouse site, at a cost of $4,975. The structure was a one-story, five-bay brick structure with a shingled wood gable roof and two interior end chimneys, resting upon a group of driven wooden pilings. A central tower housed the kerosene light. In 1839, Lewis rebuilt and moved the lighthouse at a cost of $2,500, because the flooding of the salt marsh damaged the brick foundation. In 1855, the tower was remodeled to accommodate a new cast iron lantern of the fifth order, an improved level of reflecting power. New thick plate glass with superior reflecting qualities was imported from Pons, France, for installation in the Mahon Light. The new glass also included a red sector which marked the danger zone for vessels.

However, the steady process of erosion continued to threaten the lighthouse and in 1859, it was condemned. On June 22, 1860, the United States Lighthouse Board negotiated an agreement with the Mahon River Road Company to purchase a ten-acre tract for one dollar. This site, approximately 400 feet from the first lighthouse, became the site for the second Port Mahon Light.

The second Port Mahon Lighthouse was built by Overton M. Nash , a contractor employed in the construction of lighthouses and beacons under the direction of Commander T. A. Jenkins of the Lighthouse Board. The new lighthouse was completed in late 1861. During the 1860's the lighthouse required only minor repairs but by 1870 it was apparent that shoreline erosion was again threatening the atructure. The 1870 annual report of the Lighthouse Board stated that, "The abrasion of the marsh along the front of the building has been considerable. The building is on the back end of the lighthouse lot, and the lot will have to be changed in a short time."

In subssquent years, further abrasion of the salt marsh heightened the problems and the construction of a new lighthouse and a new site was proposed. On June 23, 1874, Congress appropriated $15,000 for this purpose. The land was sold to the government for $100 by Joseph Comegys on January 18, 1875. By this time, the old site had almost entirely washed away.

The new lighthouse, opened on October 20, 1875, was located one-half mile northeast of the second lighthouse, in an area believed to be more secure. The ground was graded and raised. The third lighthouse was a two-story double frame pile building built on iron screw piles with a full porch spanning the waterfront facade. A square beacon tower rose an additional two stories from the right corner of the low-hipped roof. The second lighthouse was sold at public auction in 1876. During the next twenty years, the erosion process took its toll on the new lighthouse site. A major coastal storm on October 23, 1878, necessitated substantial repairs to the third lighthouse. In 1884, 1889, and again in 1892 the area around the lighthouse was filled with marsh, mud, and thousands of bushels of oyster shells to stabilize the eroding shoreline. The light was also changed back to fourth order. Various other improvements were made in 1891, including: the addition of a pile and sheathing revetment, resurfacing the roadway with oyster shells and rebuilding the stable, the age of which is unknown. By 1894, the Lighthouse Board's annual report stated,

> The present station is threatened with early destruction. The surrounding marsh is soft, yielding mud. . .the cost of further protection would be great and of uncertain results. The present building is of wood, the other walls being lined with brick and laid in mortar; hence it would be unwise to attempt its removal over the soft marsh.

Therefore, a new site, about one-half mile north-northwest was proposed and a detached skeleton wooden tower designed to be movable was recommended. An appropriation of $8,500 was made for this purpose by Congress on June 11, 1896, and minor repairs continued. The government acquired the land for a new lighthouse for $200 from Harriet Atkinson and Harriet Comegys on February 11, 1898. The construction was postponed because the shoreline retreat continued at a slower pace. On July 26, 1901, a contract was executed with Benjamin T. Collins of Milford, Delaware, to construct the fourth lighthouse.

In 1903, the fourth lighthouse was finished, the roof sheathed, floors laid, the exterior was painted, and the interior woodwork was finished. The light was turned on for the first time on June 25, 1903. A new barn and oil house were built approximately 60 feet northwest of the lighthouse, the dock and railing were attached, the new wharf was completed and a contract was signed for the construction of a new road across the marsh. The road was completed in 1906. Also in 1906, the abandoned third lighthouse was sold at a public auction.

The fourth (current) Port Mahon Lighthouse is considered historically significant because it is one of the few remaining examples of Chesapeake Bay-style lighthouse architecture and of screw-pile lighthouse architecture. The screw-pile lighthouse style was originated in England, in 1838, by Alexander Mitchell. Mitchell developed the concept as a, " project for obtaining a much greater holding power than was possesaed by any pile or mooring then in use. . . the plan which appeared best for obtaining a firm hold of soft ground or sand." (Heap, p. 62) Mitchell and his son built the first screw-pile lighthouse on Maplin Sand at the mouth of the Thames River. It was a hexagonal structure with one central and eight exterior piles, which were driven vertically but above the water line. They bent toward the center and inclined in a pyramidal form to the lantern floor. (Heap, p. 62) The screws attached the foundation to the structure

in much the same way as the Port Mahon Lighthouse. A screw-pile lighthouse is similar to other pile-type lighthouses, but it is actually screwed to the ocean floor. According to Major D. H. Heap, "The principle of screw-pile has been very largely used in lighthouae construction in the United States. It is especially applicable to inland waters not exposed to very heavy seas, where the bottom is such that a screw-pile can be forced through it." (Heap, p. 64)

When the United States Congress learned of Mitchells' invention, it proposed a screw-pile lighthouse for New York Harbor in the mid 1840's. However, it was never built. The first screw-pile lighthouse in the United States was erected on Brandywine Shoal in Delaware Bay. The lighthouse was completed in 1850, 46 feet above sea level, replacing a light-vessel station. It was designed and built by Major Hartman Bache, an Army engineer who was an expert on lighthouses. (Holland, p. 99). In 1871, an examination of the lighthouse showed that it stayed in very good structural condition. The success of the Brandywine Shoal Lighthouse encouraged the United States Lighthouse Board to attempt other screw-pile lighthouses, in Delaware Bay. (Holland, p. 100). There are many other examples of screw-pile lighthouses especially in the south, because the Civil War necessitated many lighthouses to be rebuilt. "Virtually all of the l ight-ships before the war were reestablished after 1865 with screw-pile lighthouses." (Holland, p. 128). Southern screw-pile lighthouses include:

Point of Shoals, James River (VA) 1865
Brant Island Shoal (NC) 1867
Harbor Island Bar (NC) 1864
Long Point Shoal (NC) 1867
Roanoke River (NC) 1867
Southwest Point Royal Shoal (NC) 1867
Horseshoe Shoal (NC) 1868
St. Helena Sound (SC) 1868
Smith Point, Potomac River (VA) 1868
Cat Island, Biloxi (MS) 1871
Dames Point, St. John's River (FL) 1872
Mobile, (AL) Channel 1885
Hatteras Island (NC) 1903

In the Chesapeake Bay and its tributaries, several light vessels were changed to screw-pile lighthouses, including:

Windmill Point (1867)
Upper Cedar Point (1867)
Lower Cedar Point (1867)
James Island (1867)
Hooper's Straight(1867)

The Hooper's Straight Lighthouse was rebuilt in 1879, then continued to function until 1954, when it was declared surplus. It was acquired by the Chesapeake Bay Maritime Museum, which moved it to St. Michaels and restored it. It is now a major tourist attraction and historic landmark. The Narrows Light in Boston Harbor (1856) is the most prominent example of screw-pile lighthouse architecture north of Delaware.

Five lightkeepers manned the Port Mahon Lighthouse between 1903 and 1939. At one time it housed an 11-member family. In 1938, the Mahon Light was electrified and operated automatically. Recollections of descendants of the lightkeepers indicate that operating the light was a family chore. The family was provided with all their household goods and kerosene by the United States Lighthouse Board. During the day, the entire family assisted in cleaning the light and preparing the kerosene to be lit during the night. When fog obscured the light, the keeper's wife stood in shallow water banging pots together to warn boaters of the dangerous shoals.

The lantern was of the fourth order and shone in a 180 degree arc from north to south. A red danger sector warned boaters of the location of the shoals. The 1910 map of Delaware prepared for the State Board of Agriculture by Rand, McNally and Company ahows that the sector of influence of the light extended across the Bay to the New Jersey shoreline.

The oyster industry, which was centered in Delaware in the late 1800's shifted to New Jersey in the early 1900'a because of superior railroad connections available there. Toward the end of the Depression, the oyster industry in Delaware enjoyed a resurgence. A shucking house, which still stands, was built a short distance north of the lighthouse and during the 1940's and 1950's the Newcomb and Hand oyster cannery operated at Port Mahon. In 1949, the United States Coast Guard, which had assumed the duties of the Lighthouse Board, decided to replace the electrified lighthouse lantern with an unmanned electric light pole in the Bay. The Port Mahon Lighthouse was permanently abandoned in 1949. The land was sold as surplus from the Coast Guard to the Air Force in 1955, which used the site as a transshipment point for jet fuel being delivered to the Dover Air Force Base, approximately ten miles to the southwest. The oyster industry in Delaware was dealt a near-fatal blow in 1959 when a parasite attacked the oyster colony. Since that time, oystering has taken place at a sharply reduced rate and Port Mahon is no longer an important shipping locale.

Since 1949, the lighthouse has deteriorated steadily. Although the structure is still considered sound, the roof and interior of the house have been heavily damaged. The balustrade and steps leading up to and following the outer perimeter of the porch have disappeared except for the principal posts carrying the balustrade rails. The fine interior fixtures, including the brass doorknobs have been removed. Irvin Lynch of Little Creek, son of a former lightkeeper, tells of a solid gold fixture which was attached to the cupola and was apparently removed by vandals after the lighthouse was abandoned. In addition, several feet of shoreline erosion occurs each year. A severe coastal storm in 1962 destroyed the out-buildings and left the lighthouse surrounded by water, as it is today. At high tide, the house lies 20-30 feet offshore.

When it was announced, in 1980, that the property, including the lighthouse was to be sold as surplus government land, some initial interest in restoring the property was created. The Delaware Technical and Community College, Terry Campus, located in Dover, submitted a plan to create a Marine Science Center focusing on a restored lighthouse. These plans were not carried through. The property was sold to the Delaware Storage and Pipeline Company of Cambridge, Massachusetts, which is a contractor to the Dover Air Force Base for the shipment of jet fuel. In July 1982, William J. Cohen and Associates, Inc., a planning consulting firm, in Newark, Delaware, was employed by the Delaware Storage and Pipeline Company to prepare the recordation of the Mahon Lighthouse for the Historic American Buildings Survey.

The Port Mahon Lighthouse, described as having been a "big attention getter"now stands alone and abandoned, but is still the object of curiosity of tourists and historians, who can frequently be seen photographing it. Moreover it still serves as a familiar visual landmark for ships navigating the Bay. The Port Mahon Lighthouse is, naturally, a major visual monument to Delaware's maritime tradition.

## Part II. ARCHITECTURAL INFORMATION

A. General Statement:

A.1. Architectural Character. The Port Mahon Lighthouse is a typical example of Chesapeake Bay-style screw-pile lighthouse architecture which was prevalent in the late nineteenth century. The lighthouse was designed according to utilitarian standards and is generallly devoid of ornate, expressive features.

A.2. Condition of Fabric. The lighthouse has undergone extensive deterioration since its abandonment in 1949. Although the foundation appears to be strong, the severe weatherization process has caused extensive rusting of the raised seam roofs and the cupola, and has worn away a portion of the siding and most of the porch. The interior has been exposed to the elements and has also decayed. The floor has weakened in many areas and a fireplace and chimney have fallen through, leaving a gaping hole. The stairways are in poor condition. The interior is littered with broken glass and other debris. The grade elevation has eroded to approximately eight feet below original construction. The foundations of the two fireplaces have been underminded and have collapsed, as well as all the outbuildings that were connected to the lighthouse by a system of boardwalks. The original grade appears to have been about three feet below the level of the first floor.

B. Description of Exterior:

B.1. Overall Dimensions. The building measures approximately 36 by 36 feet exclusive of the porch which has disappeared.

B.2. Foundation. The lighthouse is supported by screw-pile extending 25 to 30 feet through the marsh overlay to a firm sand and gravel substrata. The piling caps are bolted to the wood screw-pile and to the structure of the lighthouse. The entire system is cross-braced with diagonal rods connected to the pile top and bottom by adjustable turn buckles. The lighthouse structure screw-pile foundation is independent of the two fireplace foundations which have both collapsed. One of the two fireplaces still remains, only being supported by the floor structure.

B.3. Walls and Structural System. The frame structure is covered with milled pine weatherboard and is fully circumscribed by a cantilevered deck and an independently cantilevered porch roof. The structural system consists of floor joists mortised and tendoned to heavy timber beams below, supported by the screw-pile foundation.

B.4. Porches, Balconies. The first floor porch flooring, balustrade, and steps leading up to and following the outer perimeter of the porch have disappeared except for one principal post which carried the balustrade rails and most of the cantilevered beams.

B.5. Chimneys. Two brick flues paralleling the partition walls pierced the roof at the sides to the cupola and provided hearths for the principal first and second-story rooms. The chimney on the south side of the house crashed through the floor with the fireplace. The other chimney has been worn away except for a few bricks at the base. Both foundations have collapsed.

B.6. Openings. The landward and seaward facades present a balanced, three-bay, center door window arrangement. There are a total of five one-over-one double-hung sash windows on each side. The green shutters on the second story windows have disappeared, as well as all of the sashes.

B.7. Roof. The lighthouse is topped by a rectangular cupola finished with board-and-batten siding and an offset, metal-clad pyramidal standing seam roof. The low-hipped subroof of the main building consists of flush, horizontal sheathing covered with raised tin seam caldding which has rusted or worn away in various spots. The beacon portion of the cupola has been removed along with the ventilator ball. The cornice consists of exposed rafters with a radius cut on the ends under the subroof.

C. Description of the Interior:

C.1. Floor Plans. The lighthouse consisted of two stories and eight principal rooms and three smaller rooms. lt is characterized by a central-passage double pile plan with centrally-located stairs. The first floor included a kitchen and dining room on the south side and a parlor and a shop and store room on the north side. Fireplaces were located in the parlor, kitchen, and dining room. Two large closets separated the parlor from the shop. The second floor included four bedrooms, three small store rooms, and closets in the bedroom on the west side. The cupola was situated above the second floor, connected by a staircase. On the landing between the second floor and cupola there is a large shelf style storage area.

C.2. Stairways. The first floor staircase consists of a straight run of 17 risers and ten-inch treads, eight inches in height, with double-turned spherical pendants extending down at the landing. The second floor staircase consisted of 22 ten-inch treads with a straight run to the landing, then winding toward the cupola.

C.3. Flooring. The lighthouse has a narrow pine tongue and groove flooring system on wood joists.

C.4. Wall and Ceiling Finish. The interior is finished with slightly-raised panel, colonial-revival baseboard, vertical narrow beaded board wainscote ending in a double beaded-edge chairboard rail and diagonal narrow plank walling above. The second floor is finished with vertical plank wallboard. The ceiling is narrow plank beaded-edge board in every room.

C.5. Openings. Doors have been removed. Windows are marked by colonial raised panel trim with wood sills and aprons.

C.6. Decorative Trim. Virtually all decorative features have been removed or damaged. The kitchen includes remnants of a colonial-revival cupboard with raised panel sides and full entablature. All stair railings have been removed.

D. Site:

D.1. General Setting and Orientation. The Port Mahon Lighthouse is located along the eastern shore of Kent County, Delaware, opposite the south point of Kelly Island. The Town of Little Creek is approximately three miles west of Port Mahon. State Road 89 connects Little Creek with Port Mahon. The shoreline erosion has been so extensive that the road abutts the Delaware Bay in the vicinity of the lighthouse. Road 89 continues past the lighthouse, approximately one quarter mile north, to the former shucking house, now owned by the State of Delaware, and the public fishing pier. Immediately adjacent to the lighthouse, in the Bay, is the Delaware Storage and Pipeline Company pier from which jet fuel is unloaded by barge and transported by pipeline to the storage tanks which are located one mile west of the lighthouse on Road 89. The surrounding area is dense marshland. There are no other structures or inhabitants within two miles of the lighthouse.

D.2. Outbuildings. When the Port Mahon Lighthouse was completed in 1903, a series of outbuildings were built north and east of the lighthouse, including a barn, carriage house, a privy, and an oil house. These were connected to the lighthouse by an elevated walkway. The walkway was four feet in width and approximately seven feet high. It spanned a distance of 64 feet from the lighthouse to the oil house and 220 additional feet from the oil house to the wharf. The barn was approximately 26 feet wide and 10 feet from floor to ceiling. The oil house measured approximately 10 x 10 and the privy was approximately five feet wide and eight feet high. The outbuildings deteriorated due to neglect after the abandonment of the lighthouse in 1949 and in the severe coastal storm of 1962 they were all destroyed. Currently, at low tide, the only visible remnants are the supporting posts of the walkway, parts of the building foundations, and a portion of the galvanized oil drum in which the kerosene was stored.

Part III. SOURCES OF INFORMATION

A. Original Architectural Drawings. The United States Coast Guard Academy Library in New London, Connecticut, owns a microfilm record of the original interior and exterior plans for the Port Mahon Lighthouse and its outbuildings. These plans include sectional plans, floor plans, foundation plans, plans for the cupola, and plans for interior trim and hardware. These plans were reviewed for architectural details but could not be clearly reproduced and many details were impossible to read.

B. Early Views. Lynch family photographs of the Lighthouse, circa 1912.

C. Interviews. Irvin Lynch, son of Captail Irwin S. Lynch, lightkeeper of the Port Mahon Lighthouse from 1912-1938. Also, taped interviews with elderly residents of Leipsic and Little Creek contained in the Leipsic and Little Creek Collection, American Studies Program, University of Delaware.

D. Bibliography.

D.1. Primary and Unpublished Sources. Nomination of Port Mahon Lighthouse to the National Register of Historic Places, prepared by Dr. Bernard L. Herman, American Studies Program, University of Delaware, June 4, 1979.

Delaware Division of Historical and Cultural Affairs research information.

Delaware Division of Historical and Cultural Affairs memorandum from Dean Nelson to Lawrence C. Henry, re: Background of Port Mahon Lighthouse April 13, 1978.

Annual reports of the United States Lighthouse Board, excerpts in various years from 1842-1906.

Map of the State of Delaware (Rand, McNally and Company, 1910).

Civil Engineering Blueprints for Mahon Light Station, United States Coast Guard Fourth District, 1900. (United States Coast Guard Library, New London, Connecticut).

Blueprint of Mahon River Light Station showing arrangement of buildings, 1907.

Descriptive pamphlet of the Mahon River Light Station, 1907.

Lighthouse Correspondence, letter dated April 30, 1903 from the Engineer, Fourth Lighthouse District, to the Lighthouse Board describing the new Mahon River Light Station.

D.2. Secondary and Published Sources. Edward H. Richardson Associates, Inc. Marine Technology Center Feasibility Study. 1980.

Scharf, J. Thomas. History of Delaware 1609-1888. (Philadelphia: L. J. Richards, 1888).

Holland, Francis Ross Jr. American Lighthouses--Their Illustrated History Since 1716. (Brattleboro, VT: The Stephen Greene Press, 1972).

Heap, Major D. H. Ancient and Modern Lighthouses. (Boston, MA: Tickner and Company, 1889).

Croft, Jack. "Port Mahon Project at a Standstill." Delaware State News. 8/24/80; p. 1.

Soulsman, Gary. "Hope Dim for Lighthouse." Wilmington News-Journal 5/9/82; p. E1.

"Port Mahon. . .History Not Forgotten." (Delaware Technical and Community College, Dover, Delaware, undated brochure).

E. Likely Sources Not Yet Investigated. The following documents relating to the history and architecture of the Port Mahon Lighthouse are contained in the files of the National Archives and Records Service, Washington, DC.

1. Printed copy of an act, dated January 28, 1830, by the State of Delaware ceding to the United States jurisdiction over land near the Delaware River for lighthouse purposes.
2. Map dated December 15, 1831, of lighthouse site.
3. Copy of an Act, dated February 8, 1859, by the State of Delaware ceding to the United States jurisdiction over land and marsh adjoining Delaware Bay for a new site for the Mahon River Lighthouse.
4. Indenture dated June 22, 1860, between the Mahon River Company and the United States, for the sum of one dollar, granting land for a lighthouse site.
5. Letter dated August 14, 1860, from the United States Attorney, District of Delaware to the Lighthouse Inspector, 4th Lighthouse District, reporting on validity of the United States title to land of proposed lighthouse site.
6. Undated map of the Mahon River vicinity showing the 1831 and 1861 lighthouse sites and the proposed new site for the reservation.
7. Copy of an act June 23, 1874, appropriating funds to rebuild the Mahon River Lighthouse.
8. Map of lighthouse site and vicinity dated December 2, 1874.
9. Letter dated December 19, 1874, from the Engineer, 4th Lighthouse District to the Chairman of the Lighthouse Board reporting on the new site selected for the lighthouse.
10. Map of Mahon River Light Station and vicinity, dated January 1875.
11. Indenture dated January 18, 1875, between Joseph Comegys and wife and the United States, releasing for $100 the land on the Mahon River for lighthouse purposes.
12. Blueprint of map noted in item 6 above showing soil erosion as of 1903.
13. Copies of correspondence relating to the sale of the site to W. S. Hendrickson in 1903.
14. Deed dated February 11, 1898, from Harriet Atkins and Harriet Comegys to the United States granting for $200 property for a new lighthouse site.
15. Correspondence dated 1892-1899 concerning the title to land for the proposed lighthouse site.
16. Survey map dated 1895 of proposed new lighthouse site.
17. Blueprint of Mahon River Lighthouse site, dated December 4, 1897.
18. Map dated July 1901, showing the changes in the shoreline along the Mahon River and Delaware Bay between 1852 and 1889.

19. Contract dated July 23, 1831, with Winslow Lewis of Boston, for building and fitting up a lighthouse at Mahon's Ditch (River).

20. Abstract of contract dated September 27, 1861, with Overton M. Nash and others to erect a lighthouse and beacon at Mahon's River.

21. Abstract of contract dated July 26, 1901, with Benjamin T. Collins to erect the new Mahon'a River Lighthouse.

22. Descriptions of Fourth Distrct Lighthouse Sites, plate and description of the 1875 site.

23. Notice to mariners issued September 25, 1875, reporting that the old light will be discontinued and the new one first exhibited on and after October 20, 1875.

Part IV. PROJECT INFORMATION.

On August 8, 1982, the Delaware Storage and Pipeline Company of Cambridge, Massachusetts, retained the planning consulting firm of William J. Cohen and Associates, Inc., of Newark, Delaware, to undertake the recordation of the Port Mahon Lighthouse for the Historic American Buildings Survey. The project personnel included William J. Cohen, AICP; Frank R. Selby; Raymond E. Worrall; and Kevin R. Bender. Mr. Bender was responsible for preparing archivally processed 4" x 5" photographs; Mr. Worrall prepared the measured drawings and site plans, as required by the United States Department of the Interior; Mr. Selby was responsible for the historical research and narrative writing; and Mr. Cohen served as Project Director and field photographer.

The historical research was compiled with the assistance of the State Division of Historical and Cultural Affairs, which provided extensive documentation, including the nomination of the Port Mahon Lighthouse to the National Register of Historic places. Then, the above-named members of the Project Team proceeded to complete the required field work. On October 4, 1982, the Project Team traveled to Port Mahon to undertake inspections and measurements, photography, and sketches. An immediate and obvious obstacle to the work was the fact that the Project Team arrived at the site shortly after high tide--when the lighthouse is situated approximately 30 feet offshore in the Delaware Bay. However, photographing and gaining access to the lighthouse was made possible through the facilities of the Delaware Storage and Pipeline Company. Coincidentally, a fuel barge was discharging jet fuel at the Delaware Storage and Pipeline Company dock on that afternoon. The Project Team was granted access to the barge and to the ramp that links the dock to the shoreline. From these vantage points, the east and south sides of the lighthouse were photographed. The Delaware Storage and Pipeline Company also provided a rowboat and ladder with which the Project Team was able to enter the lighthouse. Once inside, the assignment was fraught with difficulty due to the condition of the lighthouse. The interior of the structure, having been exposed to the elements for 33 years, was in poor condition. The floor was weak--in fact the stone fireplace had fallen through the floor leaving a huge hole in the floor of one room. Elsewhere, moving about was tenuous since the floor threatened to give way in many areas. In addition, the lighthouse was littered with debris including broken glass, rotting wood panels, and thousands of tiny rodent skeletons which were believed to have been left by predatory birds. The cupola itself was structurally sound, though heavily rusted and bee-infested. Making accurate measurements proved to be difficult on the first floor roof, where sections had already fallen though the deteriorating floor. Measurements were also made under the lighthouse, in the boat. In spite of the obstacles, the field documentation was satisfactorily completed on that day. The architectural drawings and archival photographs were subsequently finalized on the basis of this field work.